Massachusetts Urban & Community Forestry Program

The Citizen Forester

DECEMBER 2014

The Best Management Practices: Tree Support Systems

By H. Dennis P. Ryan, and Rick W. Harper

Recalling once again that the Best Ed.D., Brian Kane, Ph.D. Management Practice (BMP) companion publications are developed by the International So-

ciety of Arboriculture (ISA) for application by arborists and urban forestry practitioners to aid in the

"interpretation of the professional standards and to guide work practices based on current science and technol-

ogy," we now examine "Tree Support Systems: Cabling, Bracing, Guying and Propping" (3rd ed., 2014) by E. Thomas Smiley, Ph.D., and Sharon Lilly. This guide was developed as a response to the 2013 revision to the ANSI A300 (Part 3) Tree, Shrub, and other Woody Plant Main-

tenance - Standard Practices for Supplemental Support Systems, commonly called the "Cabling Standard", by the Tree Care Industry Associa-

There has been a considerable amount of controversy in reference to cabling, especially in

relation to the issue of 1-2 when you

liability; it is assumed that install a brace or a cable

that you are doing so to add strength to a weak point in the tree, like a fork with included bark. To address these liability-related concerns, it is important to install the system according to specifications and to have a periodic inspection plan that has been explained, in writing, to the client.

A copy of the BMP for Tree Support Systems should be in every toolbox of bracing and cabling supplies. Special attention should be given to Table 4 that outlines the

"Minimum hardware size requirements for cabling trees (adapted from ANSI A300 Part 3, Table A-I)". Table 4 out-

lines the size and



Dynamic tree support. Photo: Joseph O'Brien, USDA Forest Service.

type of hardware that should be used for cabling branches of a variety of diameters. As the practitioner, it is of critical important to avoid the use of a cabling system that is not strong enough for the size of the branch being cabled. If a system failure were to occur, and it did not meet the established criteria outlined in Table 4, you may be held liable as the responsible party for both branch failure and any resulting injuries/damages. Always follow the minimum hardware size requirements for the size of the tree that is being worked on; however, bigger isn't always better: dead-end hardware like j-lags, should not be installed too closely to the opposite side of the branch into which they are being inserted.

Another cabling debate has been the use of dynamic or synthetic cabling systems; a dynamic cabling system is a system that uses a synthetic rope-like material instead of the 7-strand steel cable. This rope-like cable is more elastic than steel cables and is supposed to reduce shock loads in the cable and allow the cabled branches to sway naturally. Neither of these advantages has been experimentally documented (see a recent publication in *Urban* Forestry & Urban Greening (Volume 13 pp. 443-449). There are several very important considerations to keep in mind before using a dynamic synthetic rope for cabling that are outlined in the new BMP.

Up Ahead:

Tree Support **BMPs** Species Spotlight Climate Change in MA

Growing on Trees Mass Tree 7 Wardens Gleanings 8 News

On the

Horizon

10

Tree Support Systems: Cabling, Bracing, Guying, and Propping Management Practices Third Edition

(Continued on page 2)

PAGE 2 DECEMBER 2014

The Best Management Practices: Tree Support Systems

The dynamic systems that "wrap around the stem" have the "potential for girdling" the tree. There are dynamic systems that use traditional anchors of lags and eyebolts that will eliminate the problem of girdling damage and we would recommend these when choosing a dynamic system.

Two other considerations that affect the longevity of the synthetic cables are UV (sunlight) degradation, and the fact that small animals may actually chew on the synthetic cable itself. While steel cables will last for many years, the synthetic rope-cables have a much-shortened lifespan and need to be inspected more frequently.

Lastly, dynamic systems should never be used to cable a tree that has a weak fork or attachment. When cabling a weak attachment, we do not want to have the junction of the fork moving; in this case a steel cabling system should be used.

Bracing and cabling have a place in many tree preservation programs, and while there are limitations, a system that is well-designed and installed can help to preserve a significant tree for many years to come.

H. Dennis P. Ryan is Professor and Program Coordinator of the Arboriculture/Urban Forestry Program at UMass-Amherst. Brian Kane is the MA Arborist Assoc. Associate Professor of Commercial Arboriculture at UMass-Amherst. Richard W. Harper is the Extension Assistant Professor in the Department of Environmental Conservation at UMass-Amherst.

Urban Forestry Today Webcast Roots, Trees, and the Urban Environment

December 4, 2014, 12:00 p.m. to 1:00 p.m. EST According to research, most landscape plant health problems are related to what is taking place below ground. Join Taryn Bauerle, Ph.D., Assistant Professor in the Department of Horticulture at Cornell University, as she outlines what we have discovered - and don't yet know - about the occurrences related to tree roots in the urban soil environment.

To attend, visit www.joinwebinar.com and enter the ID code # 720-007-543.

This broadcast is free and will offer the opportunity for arborists to earn 1.0 ISA CEU and 0.5 MCA credit.

For more information, contact Rick Harper, Department of Environmental Conservation University of Massachusetts, Amherst rharper@eco.umass.edu

The Urban Forestry Today 2014 Webcast Series is sponsored by the University of Massachusetts Department of Environmental Conservation, in cooperation with the Massachusetts Tree Wardens' & Foresters' Association, University of Massachusetts Extension, and the Massachusetts Department of Conservation and Recreation.

We do our best to ensure that listings are accurate, but please check with program organizers for the most up-to-date information.

2014 Tree City USA, Tree Campus, and Tree Line Application Information

Tree City USA

The Arbor Day Foundation's <u>online portal</u> for Tree City USA applications is now accepting applications.

Application instructions are posted at: http://www.mass.gov/eea/agencies/dcr/conservation/forestry-and-fire-control/branching-out-additional-programs.html.

Tree Campus USA

Find out more about this program for colleges and universities and apply online at:

www.arborday.org/programs/treecampususa/

Tree Line USA

Information about Tree Line USA and application materials can be found at:

http://arborday.org/programs/treeLineUSA/

For questions about the application process or to find out how your community can become a Tree City USA, how your college or university can become a Tree Campus USA, or how your local utility can become a Tree Line USA, contact Mollie Freilicher,

mollie.freilicher@state.ma.us 413-577-2966.

All applications are due December 31, 2014.

DECEMBER 2014 PAGE 3

Species Spotlight—Sawtooth oak, Quercus acutissima

By Mollie Freilicher MA-DCR Community Action Forester



Sawtooth oak, a member of the white oak group, is native to Japan, Korea, China, and the Himalayas. In those areas, it grows in deciduous forests below 7,000 feet. In its native range, sawtooth oak thrives in well-drained acidic soil. It is a medium-sized tree, reaching heights of 40-60 feet with a similar spread. The habit of

sawtooth oak is pyramidal when trees are young. As trees age, the

form becomes more oval to rounded. It is hardy in USDA zones five through nine and has naturalized in some parts of the United

States, helped by its ability to produce acorns at



a young age—as young as five years old. Because of its ability to spread, it should be planted with caution in urban areas where there is opportunity to naturalize, or be avoided altogether.

Leaves are deciduous, alternate, simple, and oblong—3.5 to 7.5 inches long, acuminate, with bristles that extend from each vein termination and the leaf margin. Leaf color is dark

green in summer and yellow to yellow-brown in fall.

Bark of sawtooth oak is ashy brown with deep ridges. Sawtooth oak is monoecious—male and female flowers are on the same plant. Flowers of sawtooth oak can be messy. Male flowers are yellow pendulous catkins, while female flowers are on spikes. Acorns are large, about one-inch, with a cap that covers



about 2/3 of the fruit with long, curving scales.

Sawtooth oak does not have significant insect or disease problems, but it has escaped cultivation in some parts of the south and mid-Atlantic regions of the United States. It is not known if sawtooth oak has dis-

placed native vegetation where it has naturalized, but it is best to be cautious where it might escape and to select one of our tough, native

oaks, such as pin oak (*Quercus palustris*) or swamp white oak (*Quercus bicolor*), instead. To see sawtooth oak specimen trees, head to the Arnold Arboretum or Mount Auburn Cemetery.



UConn Plant Database http:// hort.uconn.edu/detail.php?pid=380





DCR Urban and Community Forestry Challenge Grants

Next Application Deadline: May 1

Challenge grants are 50-50 matching grants (75-25 for environmental justice projects) to municipalities and non-profit groups in Massachusetts communities of all sizes for the purpose of building local capacity for excellent urban and community forestry at the local and regional level.

The USDA Forest Service provides funding for the grant program, and DCR administers the grants with guidance from the Massachusetts Tree Wardens' and Foresters' Association. The DCR Urban and Community Forestry Program assists communities and nonprofit groups in their efforts to protect and manage community trees and forest ecosystems, with the ultimate aim of improving the environment and enhancing the livability of all of Massachusetts's communities.

For more information on the Challenge Grants (including our NSTAR Go Green grants and National Grid Partnership Grants, contact Julie Coop at 617-626-1468 or <u>julie.coop@state.ma.us</u> or Mollie Freilicher at 413-577-2966 or <u>mollie.freilicher@state.ma.us</u> or go to http://www.mass.gov/eea/agencies/dcr/conservation/forestry-and-fire-control/urban-and-community-forestry-challenge-grants.html.

PAGE 4 DECEMBER 2014

Climate Change in Massachusetts

Longer growing seasons. Increased precipitation. Increased short-term drought. Warmer winters. Increased air temperatures. Increased sea surface temperatures. Increased sea levels. We are all probably familiar with the impacts of climate change: some predicted and some already happening. What we may be less familiar with are the strategies Massachusetts has been utilizing to address climate change.

In case you had any doubts about trees being, at least, part of the answer, the word "tree" or "trees" appears in the Massachusetts Climate Change Adaptation Report 33 times. The report is the result of Governor Patrick's Global Warming Solutions Act of 2008. As required by the Act, the Climate Change Adaptation Advisory Committee was formed to devise adaptation and mitigation strategies, and subcommittees handled technical recommendations in five sectors: natural resources and habitat, key infrastructure, human health and welfare, local economy and government, and coastal zone and oceans. The report identifies several "cross-cutting" strategies strategies that emerged as themes across various sectors that the state can implement it its effort to mitigate and adapt to effects of climate change. Communities can implement many of these strategies on a local level, such as improving planning and land use practices and enhancing emergency preparedness. For more on these strategies,

Chapter Three, page 26, of the report:

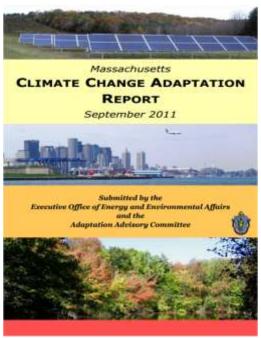
see

- Combine Mitigation and Adaptation Strategies
- 2. Identify and Fill Critical Information Gaps
- Advance Risk and Vulnerability Assessments
- 4. Evaluate and Prioritize Adaptation Strategies for Implementation
- 5. Support Local Communities
- 6. Improve Planning and Land Use Practices
- 7. Enhance Emergency Preparedness
- 8. Encourage Ecosystem-Based Adaptation
- Continue to Seek Expert Advice and Stakeholder Input
- 10. Ensure Agency and Regional Coordination
- 11. Promote Communication and Outreach
- 12. Start Now, Be Bold.

Trees emerge in various contexts in the report and often appear as "adaptation and mitigation" strategies. As former Secretary of Energy and Environmental Affairs Rick

Sullivan stated in his introduction to the report, adaptation and mitigation are "two sides of the same coin." Adaptation strategies contribute to "increased resilience and preparedness" in the face of climate change, while mitigation strategies help

reduce factors



contributing to climate change. They are both important responses to climate change, because even with mitigation in place, we will still have to adapt to changes brought about by climate change. For example, trees in urban areas help reduce the heat island effect, helping urban areas adapt to a changing climate, but they also help reduce energy use for heating and cooling, which, in turn, helps mitigate greenhouse gas emissions. And naturally, it is not just urban trees that are part of the answer, but forests as well. Combining adaptation and mitigation is the strategy of preserving large forest blocks to serve as carbon sinks, as well as elements to enhance resilience. Trees are indeed an elegant solution.

Urban trees appear as "key infrastructure" in Chapter Five to help reduce thermal load on buildings, to trap air pollutants, and to mitigate impacts of stormwater from rain events. We have seen planners consider trees as "green infrastructure," and it is important to continue utilizing trees in urban areas in the face of climate change. As we often hear, unlike "gray infrastructure" (pipes, channels, etc.) trees increase in value over time. Benefits accrued from urban trees will increase over the life of the tree, unlike "gray" infrastructure that starts to depreciate after installation. Trees appear again as strategies for public health in Chapter Six. As part of a Healthy Cities Initiative, trees will help reduce the urban heat island, promote exercise, save money, and promote climate-stabilizing technology, among other things. The

DECEMBER 2014 PAGE 5

Climate Change in Massachusetts

need for more research to guide the use of trees for public health is critical.

Urban trees and tree planting, also impacting local economy and government, are covered in Chapter Seven.

As the report states:

If tree planting activities are increased to ameliorate the heat island effect in cities, mitigate urban stormwater, and to sequester additional carbon, the increased need for saplings and trees will benefit the state's \$2.6 billion nursery industry, the largest component of the Massachusetts agricultural sector (Riechel, 2009). Forests and trees, in addition to their ecological value, provide climate and nutrient regulation, soil retention, stormwater mitigation, heat island reduction in cities, and natural filtration of drinking water supplies.

There will likely be an increasing need for nurseries to provide species well-adapted to our region and that can withstand the challenges of a changing climate—species that can withstand drought, salt, heat, and other stresses. Already, trees in northeastern urban areas have to cope with these impacts, but the drive to find species for a diverse and resilient urban forest will only increase. Resource managers should start to consider (and de-



The urban forest in Cambridge, MA.

mand) less-planted species for planting programs and be willing to take a chance on some trees on a trial basis. For example, Kentucky coffeetree is a hardy urban tree that tolerates drought, heat, occasional flooding, air pollution, and other urban conditions. (And read: other climate change conditions!) This is even a tree that is planted on mine spoils, areas notoriously difficult for tree growth. Yet, Kentucky coffeetree is often difficult to find in commerce. (Yes, I know, Kentucky coffeetree has the largest bipinnately compound leaf of all our natives, and females have fruit, but these trees are tough and should be part of the climate change planting agenda in communities.)

The next step for all of us is to continue or begin using some of these strategies for our urban and community forests. One action might be producing a response plan for storms or invasive species. It might be going through the U.S. Forest Service Urban Forest Strike Team training to learn how that program can benefit the recovery for urban forests that hurricanes, tornadoes, ice storms, and other types of storms have devastated. It might be investing in an inventory and comprehensive management plan for urban forests, so that a community can properly plan for the future. It might be planting some unfamiliar species in your community as demonstrations or experiments. It might be developing a tree ordinance to help preserve tree canopy in your community. It might be coordinating with other departments that impact trees in your community. It might be any of these responses, or it might be something different that your community values. The important thing is for us to start "doing." In the words of the Climate Change Adaptation Report, "Act Now, Be Bold."

More Information

Massachusetts Global Warming Solutions Act: http://www.mass.gov/eea/air-water-climate-change/climate-change/massachusetts-global-warming-solutions-act/

Massachusetts Climate Change Information: http://www.mass.gov/eea/air-water-climate-change/climate-change/

PAGE 6 DECEMBER 2014

Growing on Trees

Patrick Administration Implements Statewide Wood Quarantine to Limit Spread of Invasive Emerald Ash Borer

The Department of Conservation and Recreation (DCR) expanded the Emerald Ash Borer quarantine area to the entire state as of Monday, November 17, 2014. The quarantine area previously covered only Berkshire and Essex County.

The quarantine order means that certain products will be prohibited from moving outside the regulated area, including all hardwood firewood (any piece of wood smaller than 48 inches), all ash nursery stock, and any ash lumber that has not been treated. Proper wood treatments include the removal of the bark plus an additional half an inch of wood, dry kiln sterilization, or fumigation/heat treatments.

Ash trees also remain one of the 13 regulated host trees for the Asian Longhorned Beetle (ALB). The 110-square mile, ALB-regulated area in Worcester County restricts the movement beyond the regulated boundaries of ash, along with any other ALB host tree. The ALB regulated area includes Worcester, Shrewsbury, West Boylston, Boylston, and parts of Holden and Auburn.

The full press release can be found at http://www.mass.gov/eea/docs/dcr/news/2014/2014-11-12pr.pdf

New England Grows

February 4-6, 2015, Boston, MA

Held every February, New England Grows is renowned for its world-class education offerings and innovative trend spotting. Founded in 1993 by green industry professionals for green industry professionals, the educational conference and exposition gives participants unique access to targeted, industry-specific products, information, education, and connections. The New England Nursery Association, Massachusetts Arborists Association, Massachusetts Arborists Association, Massachusetts Nursery & Landscape Professionals, and Massachusetts Nursery & Landscape Association are the organization's founding partners. For more information and to register, go to http://www.newenglandgrows.org/.

Growing Greener—in Lowell

October was National <u>NeighborWoods Month</u>, an annual celebration of trees in our communities - making our cities cleaner, greener, and healthier! Volunteers from Lahey Hospital in Lowell spent a Saturday morning planting 15 trees along Father Morrisette Blvd. This event was held in partnership with <u>Lahey Hospital</u>, <u>Alliance for Community Trees</u>, and <u>EcoMedia CBS</u>. <u>Check out more pictures from the event here! If you'd like to read more about the event, <u>click here for a press release</u>.</u>



Above: Volunteers in Petersham split wood for the new wood bank—the first in Massachusetts! Pictured below: Project organizers, DCR Outreach Service Forester, Sean Mahoney, and Petersham Tree Warden, Melissa LeVangie. See the news story on Page 9.

DECEMBER 2014 PAGE 7

Growing on Trees

From the Mass Tree Wardens' & Foresters' Association

2015 Annual Conference

Tuesday-Wednesday • January 13-14, 2015

This 102nd conference features keynote speaker John Ball, well-known arborist safety advocate and Professor of Forestry at South Dakota State University.

Complete program and registration information will be posted mid-November 2014. The annual conference includes two days of educational sessions, networking opportunities, and the added benefit of continuing education credits for certified arborists, foresters, landscapers, and pesticide applicators. In 2014, there were certification credits for ISA, MCA, CTSP, MCLP, Mass. Licensed Forester, and state pesticide licenses.



Breaks with industry vendors in the Hawthorne Exhibit Hall always offer the opportunity to see the latest in gear, equipment, educational materials, and software. Many exhibitors generously donate door prizes that are awarded at the end of selected program sessions throughout the two days.

For more information, go to www.masstreewardens.org/annual-conference/.

Tree Warden of the Year Nominations

The Massachusetts Tree Wardens' and Foresters' Association is seeking nominations for the Seth H. Swift Tree Warden of the Year Award. The Association's criteria for the award winner include the following:

- Holds the position of Tree Warden or Deputy Tree Warden in a municipality
- Actively participates in Tree City USA, the National Arbor Day Foundation's program
- Demonstrates active leadership and dedication to the protection of urban trees
- Educates the community about the importance of healthy urban trees
- Holds an annual Arbor Day celebration
- Shows commitment to the profession by volunteering with a tree-related organization.

If your tree warden meets these criteria, we encourage you to fill out the nomination form to reward your community and this employee with well-deserved recognition. Nomination forms are available on the Mass Tree Wardens' website: http://masstreewardens.org/tree-warden-of-the-year/. Send in your nominations ASAP (or by December 5).

Please note: Each year the Mass. Tree Wardens receive a number of nominations, and it is always a very difficult choice! If you've nominated your Tree Warden in the past and been disappointed, we encourage you to resubmit your nomination again this year.

Scholarships

The Massachusetts Tree Wardens' and Foresters' Association awards approximately \$5,000 in scholarships each year to students who are actively studying arboriculture, community forest management, or urban forestry. An applicant must be either a student at the University of Massachusetts or—new!— a Massachusetts resident studying at an out-of-state college or university. The scholarship grants range from \$500 to \$1500 per student. Submission deadline for the MTWFA 2015 Scholarship Application is January 15. Scholarship award decisions are based on the applicant's financial need and on the achievement and maintenance of an acceptable grade point average in his or her field of study. Funding for the annual grants comes from the proceeds of the annual Arbor Day Seedling Program.

PAGE 8 DECEMBER 2014

Gleanings

The Cost of Not Maintaining Trees Symposium

March 18-19, 2015 University of South Florida, Patel Center of Global Sustainability Tampa, FL

The International Society of Arboriculture, the Florida Urban Forestry Council, and ISA-Florida Chapter will host two full days of talks, featuring some of the world's leading experts in the fields of arboriculture, urban forestry, and utility vegetation management.

The Costs of Not Maintaining Trees Symposium will explore the value trees provide as part of urban green infrastructure, attempt to quantify the costs associated with poor urban forest management practices, and examine the potential benefits that can be reaped from proper planning and maintenance. Only once these costs and benefits have been evaluated, can urban foresters, utility vegetation managers, and elected officials make effective management decisions.

Speakers will include: Dave Nowak, Greg McPherson, Cecil Konijnendijk, Rich Hauer, and many more!

For more information or to register, go to: www.isa-arbor.com/symposia

Old Trees

Joe Rankin

There's something in us that can't help but be impressed by an old tree. Perhaps we're simply in awe of something that has outlived generations of humans and will outlive us. We acknowledge this when we compare the giant sequoia groves to a cathedral. When we compile state lists of big old trees. When we give names like Methuselah to the longest-lived specimens. Most trees are not destined to live long lives. Ninety percent of the trees in a forest will never become very big, or very old. Some will lose the race for sunlight and food. Others will succumb to insects, wind, fire, or logging. It's also true that all tree species aren't created equal when it comes to potential lifespan. Some species just aren't built to become centenarians, explained Kevin Smith, a plant physiologist with the U.S. Forest Service's Northern Research Station. They have fragile wood or a weak stem or branch structure; they don't invest resources in creating chemicals to ward off pests or aren't very good at walling off wounds before fungi invade them. But even beyond a

Have You Ever Heard of a Parking Forest?

Communities can combine parking lots and urban forests without losing parking spaces in both redevelopment and retrofit projects.

This <u>website</u> provides information on how the Tualatin River Basin has started to grow a Parking Forest, located in the metropolitan region of Portland, Oregon. This information is technical in nature and available for your use to start growing a Parking Forest in your community. This project has been funded through the Oregon Department of Environmental Quality Nonpoint Source Implementation 319 Grants and implemented by the 5000 Acres Initiative Partnership.

Using a novel assembly of materials, we expect our Parking Forests to:

- Manage stormwater and increase urban forest canopy in parking lots without losing parking spaces
- Use only natural materials
- Provide a place that's so good for the tree health that they'll never push up pavement

Provide many other benefits to municipalities, communities, landowners, and others.

Visit http://www.parkingforest.org/ to learn more. (Seen in the November/December issue of Trees on Maine Street

Retired UMass Arboriculture Professor Gordon King featured in *TCI Magazine*

Read about this king of arboriculture by checking out the November issue of TCI Magazine. http://tcia.org/digital_magazine/tci-magazine/2014/11/index.htm (Pages 70-79).

tree's general characteristics, there's the specter of apoptosis – programmed cell death. According to Smith, most trees have their life span encoded in their genes. When the switch is thrown, the tree will begin to die. For some species that is measured in decades. For others, centuries. For a few, millennia. And just as with humans, some individuals live longer than others before the inevitable occurs. Read the complete piece in Northern Woodlands News.

News



Petersham Stockpiles Wood for Home-Heating Aid to Residents

Petersham — It really was a no-brainer. A town with 68.3 square miles, mostly covered with trees, Petersham is also a community where many residents heat only with wood. Creating a wood bank for home heating assistance just made sense. Beginning on Dec. 6, residents who need wood to tide them over until their next delivery will be eligible to pick up a half-pallet of wood cut and stacked by volunteers at the town transfer station. Town Forester Melissa LeVangie said the wood bank is basically repurposing wood collected from Highway Department and utility tree trimming projects that in the past would have been chipped or otherwise disposed of. Instead, the wood is being made available to residents to help heat their homes. It is the first project of its type in the state. Read the full story at Telegram.com.

No One Likes Street Tree Program but No Changes in Sight for San Francisco

By Marisa Lagos on October 27, 2014
Everyone seems to agree that they hate San Francisco's strategy around trees, which calls for the responsibility for the vast majority of the city's 105,000 street trees to be transferred to private property owners. But there aren't going to be any easy — or quick — fixes, a supervisor's committee was told Monday. The Department of Public Works has slowly been transferring street trees to private property owners for several years, "which is just a fancy way of saying they are forcing property owners to take on the maintenance of trees they may not want or be able to afford," Supervisor Scott Wiener wryly noted at a Monday hearing he and Supervisor David Chiu called for. Read the full story at: sfgate.com.

Maple Syrup Production Declines after Big Seed Year

November 3, 2014—For decades, maple syrup producers have eyed the weather to help understand spring sugar yields. But new research in the journal Forest Ecology and Management reveals a more valuable metric for understanding -- and even predicting -- syrup production: how many seed helicopters rained down from the trees the year before? "Weather affects how much sap will flow out of the tree, but sap volume is only one piece of the puzzle," says Josh Rapp, who as a postdoctoral fellow with Elizabeth Crone, associate professor of biology at Tufts University and senior author on the paper, analyzed the factors influencing 17 years of maple syrup production at 28 sites in Vermont. Read more at Science-Daily.com.

Minneapolis Begins Eight-Year Ash Canopy Replacement Plan

Minneapolis (October 25, 2014) — The Minneapolis Park and Recreation Board is taking action to prevent the emerald ash borer from destroying its parks and boulevards. It has begun the first phase of the Minneapolis Ash Canopy Replacement Plan, an eight-year project that will cost more than a million dollars a year and is funded by a levy. The plan is to eventually remove all of the ash trees in the city of Minneapolis. Removal will be spread out, so it's not too much of an impact in one area. Minneapolis foresters are marking and removing all public ash trees to prevent a sudden, large-scale loss of trees to the destructive emerald ash borer, which has happened in other U.S. cities. The plan will remove a total of 40,000 ash trees in parks and on boulevards, and each of those trees will be replaced. Only public ash trees are being removed. None on private property. Next spring they will plant 10,000 new trees, and ideally, the city will plant more trees than it removes — from buckeye to beech to birch. Read the full story at ACTrees.org.

Blight-Resistant American Chestnut Trees Take Root

November 6, 2014—Scientists at the SUNY College of Environmental Science and Forestry (ESF) are growing the first American chestnut trees that can withstand the blight that virtually eliminated the once-dominant tree from the eastern United States. Members of the ESF research team recently published three peer-reviewed papers that, along with continuing research, support their conviction that their biotechnology work with a gene originating in wheat makes the American chestnut tree at least as blight resistant as the Chinese chestnut tree, which can co-exist with blight with minimal ill effects. "Our goal was to develop an American chestnut tree that has blight resistance equal to that of a Chinese chestnut and we are there. We've done it," said Dr. William Powell, an ESF professor who leads the research project along with Dr. Chuck Maynard. "The leaf assays show it, the small-stem assays show it," Powell said, referring to the analytical processes the researchers go through to determine the level of blight resistance. "These American chestnut trees are blight resistant." Read the full story at Science Daily.com.

On the Horizon

Dec 1 Nominations due ASAP! Tree Warden of the Year, www.masstreewardens.org

Deadline for registration: Municipal Forestry Institute Dec 1

Dec 3 Lecture—Arthur Shurcliff: From Boston to Colonial

> Williamsburg, Arnold Arboretum, http://my.arboretum.harvard.edu/

ISA Exam, University of Maine, Orono, Dec 6

www.newenglandisa.org

Dec 9 Course full! Tree Risk Assessment, Mass Tree Wardens'

and Foresters' Association, Acton, MA,

www.masstreewardens.org

Jan 13-14 Mass Tree Wardens' and Foresters' Association Annual

Conference, Sturbridge, MA, www.masstreewardens.org

Feb 4-6 New England Grows, Boston, MA,

http://www.newenglandgrows.org/

Feb 22-27 Municipal Forestry Institute, Portland, OR,

www.urban-forestry.com

Mar 10 UMass Community Tree Conference, Amherst, MA,

www.umassgreeninfo.org



Bureau of Forestry Department of Conservation and Recreation 251 Causeway Street, Suite 600 Boston, MA 02114

Julie Coop, Urban and Community Forester julie.coop@state.ma.us, 617-626-1468

mollie.freilicher@state.ma.us, (413) 577-2966

Mollie Freilicher, Community Action Forester





Deval Patrick, Governor

Maeve Vallely Bartlett, Secretary, Executive Office of Energy and Environmental Affairs

John P. Murray, Commissioner, Department of Conservation and Recreation

Peter Church, Director of Forest Stewardship, Department of Conservation and Recreation

The Department of Conservation and Recreation prohibits discrimination in employment on the basis of race, color, creed, religion, national origin, ethnicity, gender, gender identity or expression, age, sexual orientation, Vietnam Era Veteran status, or disability.

The Citizen Forester is made possible through a grant from the USDA Forest Service Urban and Community Forestry Program and the Massachusetts Department of Conservation and Recreation, Bureau of Forestry.

If you have a topic you'd like to see covered or

want to submit an item to The Citizen Forester (article, photo, event listing, etc.), please contact Mollie Freilicher or click here.

Subscribe? Unsubscribe? You are receiving this email because you have requested to receive The Citizen Forester. If this is an error or you do not wish to receive this newsletter, please email mollie.freilicher@state.ma.us. To sign up, click here.